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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/783,634

02/20/2004

Zine-Eddine Boutaghou

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7332

7590

12/19/2005

Seagate Technology LLC  
1280 Disc Drive  
Shakopee, MN 55379

EXAMINER

LEE, GILBERT Y

ART UNIT

PAPER NUMBER

3673

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/783,634

Applicant(s)

BOUTAGHOU ET AL.

Examiner

Gilbert Y. Lee

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 6, 14, 19, 26 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 15-17, 20-25, 27-31, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/20/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Regarding the Restriction filed by the examiner on 9/12/05, the applicant has traversed the restriction of species I and II on the grounds that these elements are distinct from one another and coexist with one another as elements of a flex seal assembly. The examiner respectfully withdraws the restriction of species I and II. The applicant withdrew claim 32 as not being drawn to a nonelected species.
2. Claims 6, 14, 19, and 26 are withdrawn from further consideration, as well, pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. It is noted that these claims refer to Fig. 7, which is drawn to a non-elected species. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/12/05.

### ***Specification***

The disclosure is objected to because of the following informalities:

Page 6, Line 25, "conductor 130" should be changed to "conductor 128",

Page 8, Line 28, "FIG. 13" should be changed to "FIG. 15", and

Page 9, Lines 25, "FIG. 13" should be changed to "FIG. 15".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 5, 7, 11, 16-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt (US Patent No. 5,100,494).

Regarding claim 1, the Schmidt reference discloses a sealed housing (Fig. 1) comprising: first (12) and second (14) housing members; a flex seal assembly (Fig. 2); a heating member (30); and a sealing material (28).

Regarding claim 2, the Schmidt reference discloses a heating member (30) comprising a layer of dielectric (Col. 3, Lines 62-67).

Regarding claim 3, the Schmidt reference discloses a polyimide insulator (34).

Regarding claim 5, the Schmidt reference discloses a layer of adhesive on opposing sides of the heating element (Col. 3, Lines 41-44).

Regarding claim 7, the Schmidt reference discloses a hermetic seal (Fig. 2).

Regarding claim 11, the Schmidt reference discloses glass beads (31) placed between the heating element and the facing surface (Col. 3, Lines 51-56). Note that by placing these beads, separate rings are formed as shown in Fig. 2, within the top ring and the bottom ring.

Regarding claim 16, the Schmidt reference discloses a flex seal assembly (Fig. 2) comprising: a heating member (30) comprising a resistance wire (32) within a layer of dielectric (Col. 3, Lines 62-67).

Regarding claim 17, the Schmidt reference discloses a layer of adhesive on opposing sides of the heating element (Col. 3, Lines 41-44).

Regarding claim 18, the Schmidt reference discloses a hermetic seal (Fig. 2).

Regarding claim 20, the Schmidt reference discloses glass beads (31) placed between the heating element and the facing surface (Col. 3, Lines 51-56). Note that by placing these beads, separate rings are formed as shown in Fig. 2, within the top ring and the bottom ring.

2. Claims 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ananth et al. (US Patent No. 5,454,157).

Regarding claim 13, the Ananth et al. reference discloses a sealed housing (Fig. 8) comprising: first (67) and second housing members (75) and means for sealing (61) the first and second housing members.

Regarding claim 15, the Ananth et al. reference discloses a screw for fastening the housing (Col. 12, Lines 66-67 and Col. 13, Lines 1-2).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 4, 8, 12, 21-25, 27-31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ananth et al. (US Patent No. 5,454,157) in view of Schmidt.

Regarding claim 1, the Ananth et al. reference discloses a sealed disk drive (Fig. 8) comprising: first (67) and second (75) housing members; and a flex seal assembly (61), but fails to disclose a heating member and its material. Attention is drawn to the Schmidt reference, which discloses a bonding and debonding system. It would have been obvious to replace the gasket of the Ananth et al. reference with the system of the Schmidt reference to allow easy installation and removal of a hermetic seal.

Regarding claim 4, the Ananth et al. reference as modified discloses a screw to be used to fasten the housing (Ananth et al. Col. 12, Lines 66-67 and Col. 13, Lines 1-2).

Regarding claim 8, the Ananth et al. reference as modified discloses a nitrogen gas inserted into the housing (Ananth et al. Col. 15, Lines 3-5).

Regarding claim 12, the Ananth et al. reference as modified discloses a sealed disk drive (Ananth Fig. 8).

Regarding claim 21, the Ananth et al. reference as modified discloses a method for sealing a housing, comprising: providing first (Ananth et al. 67) and second (Ananth et al. 75) housing members; placing a flex seal assembly between the first and second

housing members (61), but fails to disclose a heating member and its material.

Attention is drawn to the Schmidt reference, which discloses a bonding and debonding system. It would have been obvious to replace the gasket of the Ananth et al. reference with the system of the Schmidt reference to allow easy installation and removal of a hermetic seal.

Regarding claim 22, the Ananth et al. reference as modified discloses a heating member (30) comprising a resistance wire (32) within a layer of dielectric (Col. 3, Lines 62-67).

Regarding claim 23, the Ananth et al. reference as modified discloses a screw to be used to fasten the housing (Ananth et al. Col. 12, Lines 66-67 and Col. 13, Lines 1-2).

Regarding claims 24 and 28, the Ananth et al. reference as modified discloses a layer of adhesive on opposing sides of the heating element (Schmidt Col. 3, Lines 41-44).

Regarding claim 25, the Ananth et al. reference as modified discloses a hermetic seal and a method to evacuate an existing fluid with an inert fluid (Ananth et al. Col. 15, Lines 3-5).

Regarding claim 29, the Ananth et al. reference as modified discloses glass beads (Schmidt 31) placed between the heating element and the facing surface (Schmidt Col. 3, Lines 51-56). Note that by placing these beads, separate rings are formed as shown in Fig. 2 of Schmidt, within the top ring and the bottom ring.

Regarding claim 30, the Ananth et al. reference as modified discloses a method of unsealing the housing comprising: applying voltage (Schmidt Col. 5, Lines 60-63) and removing the first and second housing members (Schmidt Col. 6, Lines 1-3).

Regarding claim 31, the Ananth et al. reference as modified discloses a sealed disk drive (Ananth Fig. 8).

Regarding claim 33, the Ananth et al. reference as modified discloses providing at least one ring of sealing material on the flex seal assembly prior to the placing step. Note that if sealing ring is attached to the heating member and must be done before placing between housings.

2. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Lau (US Patent No. 6,492,620).

Regarding claim 9, the Schmidt reference discloses the invention substantially as claimed, but fails to disclose the sealing ring being made of solder. Attention is drawn to the Lau reference, which discloses that a variety of adhesives, such as thermosetting epoxies or thermoplastics, and solder are available to provide the bonding (Lau Col. 2, Lines 16-18).

3. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ananth et al. in view of Schmidt further in view of Lau.

Regarding claim 27, the Ananth et al. reference as modified discloses the invention substantially as claimed, but fails to disclose the sealing ring being made of



solder. Attention is drawn to the Lau reference, which discloses that a variety of adhesives, such as thermosetting epoxies or thermoplastics, and solder are available to provide the bonding (Lau Col. 2, Lines 16-18).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bryant, III (US Patent No. 6,578,852), Hipwell et al. (US Pub. No. 2005/0194174), Noda (US Patent No. 6,417,985), Kamigama et al. (US Patent No. 6,829,818), Renwick (US Patent No. 3,542,375), Giarusso et al. (US Patent No. 5,137,283), and Horsma et al. (US Patent No. 4,095,044).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gilbert Y. Lee whose telephone number is 571-272-5894. The examiner can normally be reached on 8:00 - 4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Suzanne L. Barrett can be reached on (571)272-7053. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

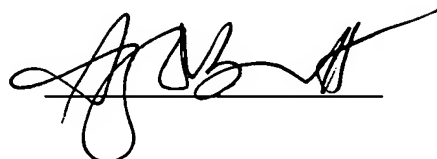
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GL

12/12/2005

Suzanne Barrett

SPE AU3673

A handwritten signature in black ink, appearing to read 'Suzanne Barrett', is written over a horizontal line.